

REMARKS

Applicant hereby submits that the enclosures fulfill the requirements under 37 C.F.R. §1.821-1.825. The amendments in the specification merely insert the paper copy of the Sequence Listing and sequence identifiers in the specification. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment.

The amendment to Figure 2 serves only to correct a typographic error in the nucleic acid sequence (SEQ ID NO:10) designated "mtbn2" in Figure 2. As shown in the attached marked-up copy of Figure 2, the amendment serves to change nucleotide 295 in the "mtbn2" sequence from a "t" to a "g". The last codon in SEQ ID NO:10 being a stop codon ("tag"), the effect of this amendment is to change the penultimate codon from "taa" to "gaa". While the "taa" codon does not code for any amino acid, the "gaa" codon codes for glutamic acid (E). As shown in the predicted amino acid sequence of the protein encoded by "mtbn2" nucleic acid sequence (designated "MTBN2" in Figure 1; SEQ ID NO:2), the last amino acid in the protein is glutamic acid (E). Thus, the requested change in the nucleotide sequence of "mtbn2" is supported by the amino acid sequence of "MTBN2". This consideration indicates that the "t" in the penultimate codon of SEQ ID NO:10 was indeed a typographic error and should have been a "g". No new matter is added by this amendment to Figure 2.

Note that in both the enclosed computer readable form and the enclosed hard copy of the Sequence Listing, the correct sequence of "mtbn2" (SEQ ID NO:10) is provided.

The amendment to Figure 3 serves only to correct an error in the designation of the protein indicated in Figure 3 to be one of three used to challenge subgroups within four groups of guinea pigs (see Example 1 on page 14 and the description of Figure 3 on page 10 of the specification). From the experimental description on pages 14-15, it is clear that the agent used to challenge the guinea pigs shown by the set of bars on the right of the figure is the "MTBN4" protein. No new matter is added by this amendment to Figure 3.

Applicant : Maria L. Gennaro
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Filed : November 2, 2001
Page : 4

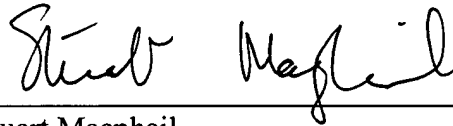
Attorney's Docket No.: 07763-043001

Please apply any charges or credits to Deposit Account No. 06-1050, referencing attorney docket no. 07763-043001.

Respectfully submitted,

Date: _____

4/6/03



Stuart Macphail
Reg. No. 44,217

Fish & Richardson P.C.
45 Rockefeller Plaza, Suite 2800
New York, NY 10111
Telephone: (212) 765-5070
Facsimile: (212) 258-2291

“Version With Markings to Show Changes Made”

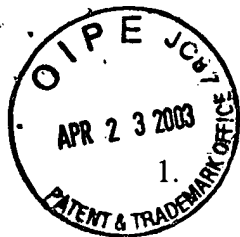
In the specification:

Paragraph beginning at page 9, line 31, has been amended as follows:

[Figure 1 is] Figures 1A and 1B are a depiction of the amino acid sequences of *M. tuberculosis* polypeptides MTBN1-MTBN8 (SEQ ID NOs:1-8, respectively).

Paragraph beginning at page 9, line 33, has been amended as follows:

[Figure 2 is] Figures 2A-2E are a depiction of the nucleotide sequences of the coding regions (mtbn1-mtbn8) encoding MTBN1-MTBN8 (SEQ ID NOs:9-16, respectively).



Application No. 10/009,383

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CAR §1.821 - §1.825 for the following reason(s):

- ☒ 1. This application clearly fails to comply with the requirements of 37 CAR §1.821 - §1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990, and at 55 FR 18230, May 1, 1990.
- ☒ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 CAR §1.821(c).
- ☒ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CAR §1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CAR §1.822 and/or §1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing".
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CAR §1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CAR §1.821(e).
- ☐ 7. Other: _____

APPLICANT MUST PROVIDE:

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as were as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 CAR §1.821(e) or §1.821(f) or §1.821(g) or §1.825(b) or §1.825(d).

FOR QUESTIONS REGARDING COMPLIANCE WITH THESE REQUIREMENTS, PLEASE CONTACT:

For Rules Interpretation, call (703) 308-1123
For CRF Submission help, call (703)308-4212
For Patent Software help, call (703) 557-0400

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FIG. 2

mtbn1

1	atgactgctg	aaccggaagt	acggacgctg	cgcgaggttg	tgctggacca
51	gctcggcact	gctgaatcgc	gtgcgtacaa	gatgtggctg	ccgccgttga
101	ccaatccggt	cccgtcaac	gagctcatcg	cccgtgatcg	gcgacaaccc
151	ctgcgatttg	ccctggggat	catggatgaa	ccgcgccgcc	atctacagga
201	tgtgtggggc	gtagacgttt	ccggggccgg	cggcaacatc	ggtattgggg
251	gcgcacctca	aaccgggaag	tcgacgctac	tgacagacgat	ggtgatgtcg
301	gccgccgcca	cacactcacc	gcgcaacgtt	cagttctatt	gcacgcacct
351	aggtggcggc	gggctgatct	atctcgaaaa	ccttccacac	gtcgggtgggg
401	tagccaatcg	gtccgagccc	gacaagggtca	accgggtggg	cgcagagatg
451	caagccgtca	tgccggcaacg	ggaaaccacc	ttcaagggaac	accgagtggtg
501	ctcgatcggg	atgtaccggc	agctgcgtga	cgatccaagt	caacccggtg
551	cgtccgatcc	atacggcgac	gtctttctga	tcacgcacgg	atggcccggg
601	tttgtcggcg	agttccccga	ccttgagggg	caggttcaag	atctggccgc
651	ccaggggctg	gcgttcggcg	tccacgtcat	catctccacg	ccacgctgga
701	cagagctgaa	gtcgcgtggt	cgcgactacc	tcggcaccaa	gatcgagttc
751	cggcttggtg	acgtcaatga	aaccagatc	gaccggatta	cccgcgagat
801	cccggcgaat	cgtccgggtc	gggcagtgtc	gatggaaaag	caccatctga
851	tgatcggcgt	gcccagggtc	gacggcgtgc	acagcggcga	taacctggtg
901	gaggcgatca	ccgcgggggt	gacgcagatc	gcttcccagc	acaccgaaca
951	ggcacctccg	gtgcgggtcc	tgccggagcg	tatccacctg	cacgaactcg
1001	accogaaccc	gccgggacca	gagtcgcact	accgcactcg	ctgggagatt
1051	ccgatcggct	tgccgcgagac	ggacctgacg	ccggctcact	gccacatgca
1101	cacgaacccg	cacctactga	tcttcgggtg	ggccaaatcg	ggcaagacga
1151	ccattgccca	cgcgatcgcg	cgcgccattt	gtgcccga	cagtcctccag
1201	caggtgcggt	tcacgtctgc	ggactaccgc	tcgggcctgc	tggaacgcggt
1251	gccggacacc	catctgctgg	gcgcggcg	gatcaaccgc	aacagcgcgt
1301	cgctagacga	ggccgttcaa	gcactggcgg	tcaacctgaa	gaagcgggtg
1351	ccgccgaccg	acctgacgac	ggcgcagcta	cgctcgcgtt	cgtggtggag
1401	cggatttgac	gtcgtgcttc	tggtcgacga	ttggcacatg	atcgtgggtg
1451	ccgccggggg	gatgccgccc	atggcaccgc	tgggcccgtt	attgccggcg
1501	gcggcagata	tcgggttgca	catcattgtc	acctgtcaga	tgagccaggc
1551	ttacaaggca	accatggaca	agttcgtcgg	cgccgcattc	gggtcggggc
1601	ctccgacaat	gttcctttcg	ggcgagaagc	aggaattccc	atccagttag
1651	ttcaagggtca	agcggcgccc	ccctggccag	gcatttctcg	tctcgccaga
1701	cggcaaagag	gtcatccagg	ccccctacat	cgagcctcca	gaagaagtgt
1751	tcgcagcacc	cccaagcgcc	ggttaa		

mtbn2

1	atggaaaaaa	tgtcacatga	tccgatcgct	gccgacattg	gcacgcaagt
51	gagcgacaac	gctctgcacg	gcgtgacggc	cggctcgacg	gcgctgacgt
101	cggtgaccgg	gctggttccc	gcggggggccg	atgaggtctc	cgcccaagcg
151	gcgacggcgt	tcacatcgga	gggcatccaa	ttgctggctt	ccaatgcac
201	ggcccaagac	cagctccacc	gtgcggggcga	agcgggtccag	gacgtcgccc
251	gcacctattc	gcaaatcgac	gacggcgccg	ccggcgtctt	cgcccaatag

↑g

mtbn3

1	atgctgtggc	acgcaatgcc	accggagcta	aataccgcac	ggctgatggc
51	cggcgcgggg	ccggctccaa	tgcttgcgcc	ggccgcggga	tggcagacgc
101	tttcggcgcc	tctggacgct	caggccgctc	agttgaccgc	gcgcctgaac

FIG. 2 (continued)

151	tctctgggag	aagcctggac	tggaggtggc	agcgacaagg	cgcttgccgc
201	tgcaacgccg	atggtggtct	ggctacaaac	cgcgtaaca	caggccaaga
251	cccgtgcgat	gcaggcgacg	gcgcaagccg	cggcatacac	ccaggccatg
301	gccacgacgc	cgtcgctgcc	ggagatcgcc	gccaaccaca	tcacccaggc
351	cgtccttacg	gccaccaact	tcttcggtat	caacacgata	ccgatcgct
401	tgaccgagat	ggattatttc	atccgtatgt	ggaaccaggc	agccctggca
451	atggaggtct	accaggccga	gaccgcggtt	aacacgcttt	tcgagaagct
501	cgagccgatg	gcgtcgatcc	ttgatcccgg	cgcgagccag	agcacgacga
551	acccgatctt	cggaatgccc	tcccctggca	gctcaacacc	ggttggccag
601	ttgccgccc	cggtaccca	gaccctcgcc	caactgggtg	agatgagcgg
651	cccgatgcag	cagctgaccc	agccgctgca	gcaggtgacg	tcgttggtca
701	gccaggtggg	cggcaccggc	ggcggcaacc	cagccgacga	ggaagccgcg
751	cagatggggc	tgctcggcac	cagtcgctg	tcgaaccatc	cgctggctgg
801	tggatcaggc	cccagcgcgg	gcgcgggccc	gctgcgcgcg	gagtcgctac
851	ctggcgcagg	tgggtcggtg	acccgcacgc	cgctgatgtc	tcagctgatc
901	gaaaagccgg	ttgccccctc	ggtgatgccg	gcggctgctg	ccggatcgtc
951	ggcagcgggt	ggcgccgctc	cggtgggtgc	gggagcgatg	ggcagggtg
1001	cgcaatccgg	cggtccacc	aggccgggtc	tggtcgcgcc	ggcaccgctc
1051	gcgcaggagc	gtgaagaaga	cgacgaggac	gactgggacg	aagaggacga
1101	ctggtga				

mtbn4

1	atggcagaga	tgaagaccga	tgccgctacc	ctcgcgcagg	aggcaggtaa
51	tttcgagcgg	atctccggcg	acctgaaaac	ccagatcgac	caggtggagt
101	cgacggcagg	ttcgttgacg	ggccagtggc	gcggcgcggc	ggggacggcc
151	gcccaggccg	cggtggtgcg	cttccaagaa	gcagccaata	agcagaagca
201	ggaactcgac	gagatctcga	cgaatatctg	tcaggccggc	gtccaatact
251	cgagggccga	cgaggagcag	cagcaggcgc	tgtcctcgca	aatgggcttc
301	tga				

mtbn5

1	atggcggccc	actacgacaa	gctcttcggy	ccgcacgaag	gtatggaagc
51	tccggacgat	atggcagcgc	agccgttctt	cgaccccagt	gcttcgtttc
101	cgccggcgcc	cgcatcgcca	aacctaccga	agcccaacgg	ccagactccg
151	cccccgacgt	ccgacgacct	gtcggagcgg	ttcgtgtcgg	ccccgcgcgc
201	gccacccccca	ccccacctc	cgctccgccc	aactccgatg	ccgatcgccg
251	caggagagcc	gccctcgccg	gaaccggccg	catctaaacc	acccacaccc
301	cccatgcccc	tcgcccggacc	cgaaccggcc	ccacccaaac	cacccacacc
351	cccatgccc	atcgccggac	ccgaaccggc	cccacccaaa	ccacccacac
401	ctccgatgcc	catcgccgga	cctgcaccca	ccccaaaccga	atcccagttg
451	gcgcccccca	gaccaccgac	accacaaacg	ccaaccggag	cgccgcagca
501	accggaatca	ccggcgcccc	acgtaccctc	gcacggggcca	catcaacccc
551	ggcgcaccgc	accagcaccg	ccctgggcaa	agatgccaat	cggggaaccc
601	ccgcccgcctc	cgctccagacc	gtctgcgtcc	ccggccgaac	caccgacccg
651	gcctgcccc	caacactccc	gacgtgcgcg	ccgggggtcac	cgctatcgca
701	cagacaccga	acgaaacgtc	gggaaggtag	caactgggtcc	atccatccag
751	gcgcggctgc	gggcagagga	agcatccggc	gcgcagctcg	cccccggaac
801	ggagccctcg	ccagcgcctg	tgggccaacc	gagatcgat	ctggctccgc
851	ccacccgccc	cgcgccgaca	gaacctcccc	ccagcccctc	gccgcagcgc
901	aactccggctc	ggcgtgcccga	gcgacgcgtc	caccccgat	tagccgcca

FIG. 2 (continued)

951	acatgccgcg	gcgcaacctg	attcaattac	ggccgcaacc	actggcggtc
1001	gtcgccgcaa	gcgtgcagcg	ccggatctcg	acgcgacaca	gaaatcctta
1051	aggccggcgg	ccaaggggcc	gaaggtgaag	aaggtgaagc	cccagaaacc
1101	gaaggccacg	aagccgcccc	aagtgggtgc	gcagcgcggc	tggcgacatt
1151	gggtgcatgc	gttgacgcga	atcaacctgg	gcctgtcacc	cgacgagaag
1201	tacgagctgg	acctgcacgc	tcgagtcgcg	cgcaatcccc	gcgggtcgta
1251	tcagatcgcc	gtcgtcggtc	tcaaagggtg	ggctggcaaa	accacgctga
1301	cagcagcggt	ggggtcgacg	ttggctcagg	tgccggccga	ccggatcctg
1351	gctctagacg	cggatccagg	cgccggaaac	ctcgccgacg	gggtagggcg
1401	acaatcgggc	gcgaccatcg	ctgatgtgct	tgcagaaaaa	gagctgtcgc
1451	actacaacga	catccgcgca	cacactagcg	tcaatgcggt	caatctggaa
1501	gtgctgccgg	caccggaata	cagctcggcg	cagcgcgcg	tcagcgacgc
1551	cgactggcat	ttcatcgccg	atcctgcgct	gaggttttac	aacctcgtct
1601	tggctgattg	tggggccggc	ttcttcgacc	cgctgaccgg	cggcgtgctg
1651	tccacgggtg	ccgggtgctg	ggctcgtggc	agtgtctcaa	tcgacggcgc
1701	acaacaggcg	tcgggtcgct	tggagtgggt	gcgcaacaac	ggttaccaag
1751	at ttggcgag	ccgcgcagct	gtgggtcatca	atcacatcat	gccgggagaa
1801	cccaatgtcg	cagttaaaga	cctgggtgcg	catttcgaac	agcaagttca
1851	acccggccgg	gtcgtgggtc	tgccgtggga	caggcacatt	gcggccggaa
1901	ccgagatttc	actcgacttg	ctcgacccta	tctacaagcg	caaggtcctc
1951	gaattggccg	cagcgctatc	cgacgatttc	gagagggctg	gacgtcgttg
2001	a				

mtbn6

1	ttgagcgcac	ctgctgttgc	tgctgggtcct	accgccgcgg	gggcaaccgc
51	tgcgcggcct	gccaccaccc	gggtgacgat	cctgaccggc	agacggatga
101	ccgattttgg	actgccagcg	gcgggtgccga	tggaaactta	tattgacgac
151	accgtcgcg	tgctttccga	gggtgttgaa	gacacgcgg	ctgatgtact
201	cggcggttc	gactttaccg	cgcaaggcgt	gtgggcgttc	gctcgtccc
251	gatcgccg	gctgaagctc	gaccagtcac	tcgatgacgc	cggggtggtc
301	gacgggtcac	tgctgactct	gggtgcagtc	agtcgcaccg	agcgtaccg
351	accgttggtc	gaggatgtca	tcgacgcgat	cgccgtgctt	gacgagtcac
401	ctgagttcga	ccgcacggca	ttgaatcgct	ttgtgggggc	ggcgatccc
451	cttttgaccg	cgcccgtcat	cggagtggcg	atgcgggcgt	gggtgggaaac
501	tgggcgtagc	ttgtgggtgg	cgttggcgat	tggcatcctg	gggatcgctg
551	tgctggtagg	cagcttcgct	gcgaacagg	tctaccagag	cgccaccctg
601	gccgagtgcc	tactgggtcac	gacgtatctg	ctgatcgcaa	ccgccgcagc
651	gctggccgtg	ccgttgccgc	gcgggggtcaa	ctcgttgggg	gcgccacaag
701	ttgccggcgc	cgctacggcc	gtgctgtttt	tgacctgat	gacgcggggc
751	ggccctcgga	agcgtcatga	gttggcgctg	tttgccgtga	tcaccgctat
801	cgcggtcac	gcggccgcgg	ctgccttcgg	ctatggatac	caggactggg
851	tccccgcggg	ggggatcgca	ttcgggctgt	tcattgtgac	gaatgcggcc
901	aagctgaccg	tcgcgggtcg	gcggatcgcg	ctgccgcga	ttccggtacc
951	cggcgaaacc	gtggacaacg	aggagttgct	cgatcccgtc	gcgaccccg
1001	aggctaccag	cgaagaaacc	ccgacctggc	aggccatcat	cgcgtcgggtg
1051	ccgcggtccg	cggtccggct	caccgagcgc	agcaaactgg	ccaagcaact
1101	tctgatcgga	tacgtcacgt	cgggcaccct	gattctgggt	gccgggtgcca
1151	tcgcgggtcgt	ggtgcgcggg	cacttccttg	tacacagcct	gggtggtcgcg
1201	ggtttgatca	cgaccgtctg	cggatttcgc	tcgcggcttt	acgccgagcg
1251	ctgggtgtgcg	tgggcgttgc	tggcggcgac	ggtcgcgatt	ccgacgggtc
1301	tgacggccaa	actcatcatc	tggtagccgc	actatgcctg	gctgttgttg

FIG. 2 (continued)

1351 agcgtctacc tcacggtagc cctgggtgcg ctcgtgggtgg tcgggtcgat
 1401 ggctcacgtc cggcgcggtt caccgggtcgt aaaacgaact ctggaattga
 1451 tcgacggcgc catgatcgct gccatcattc ccatgctgct gtggatcacc
 1501 ggggtgtacg acacgggtccg caatatccgg ttctga

mtbn7

1 atggctgaac cggtggccgt cgatcccacc ggcttgagcg cagcggccgc
 51 gaaattggcc ggcctcggtt ttccgcagcc tccggcgccg atcgcggtca
 101 gcggaacgga ttcggtggta gcagcaatca acgagaccat gccaaagcatc
 151 gaatcgctgg tcagtgcagg gctgcccggc gtgaaagccg ccctgactcg
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 301 ggcctggctg gcgtcgccctc ggtcgggtgg cagccaagtc aggctaccca
 351 gctgctgagc acaccggtgt cacagggtcac gaccagctc ggcgagacgg
 401 ccgctgagct ggcaccccggt gttgttgcca cggtgccgca actcgttcag
 451 ctggctccgc acgccgttca gatgtcgcaa aacgcattcc ccatacgctca
 501 gacgatcagt caaacgcgcc aacaggccgc ccagagcgcg cagggcgcca
 551 gcggcccaat gcccgcacag cttgccagcg ctgaaaaacc ggccaccgag
 601 caagcggagc cgggtccacga agtgacaaac gacgatcagg gcgaccaggg
 651 cgacgtgcag ccggccgagg tcgttgccgc ggcacgtgac gaaggcgccg
 701 gcgcatacacc gggccagcag cccggcgggg gcgttcccgc gcaagccatg
 751 gataccggag ccggtgcccg cccagcgggc agtccgctgg cggccccggt
 801 cgatccgctcg actccggcac cctcaacaac cacaacggtg tag

mtbn8

1 atgagtatta ccaggccgac gggcagctat gccagacaga tgctggatcc
 51 gggcggtcgg gtggaagccg atgaagacac tttctatgac cgggcccagg
 101 aatatagcca ggttttgcaa agggtcaccg atgtattgga cacctgccgc
 151 cagcagaaag gccacgtctt cgaaggcggc ctatgggtccg gcggcgccgc
 201 caatgctgcc aacggcgccc tgggtgcaaa catcaatcaa ttgatgacgc
 251 tgcaggatta tctcgccacg gtgattacct ggcacaggca tattgccggg
 301 ttgattgagc aagctaaatc cgatatcggc aataatgtgg atggcgctca
 351 acgggagatc gatatacctg agaatgaccc tagcctggat gctgatgagc
 401 gccataccgc catcaattca ttggtcacgg cgacgcattg ggccaatgtc
 451 agtctggctc ccgagaccgc tgagcgggtg ctggaatcca agaattggaa
 501 acctccgaag aacgcactcg aggatttgct tcagcagaag tcgccgccac
 551 cccagacgt gcctaccctg gtcgtgccat ccccgggcac accgggcaca
 601 ccgggaaccc cgatcacccc gggaacccc atcaccccgg gaacccaat
 651 cacaccatc ccgggagcgc cggtaactcc gatcacacca acgcccggca
 701 ctcccgtcac gccgggtgacc cggggcaagc cggtcacccc ggtgaccccg
 751 gtcaaaccgg gcacaccagg cgagccaacc ccgatcacgc cggtcacccc
 801 cccggtcgcc ccggccacac cggcaacccc ggccacgccc gttaccccag
 851 ctcccgtccc acaccgcag ccggctccgg caccggcgcc atcgctggg
 901 cccagccgg ttacaccggc cactcccggc cgtctgggtc cagcaacacc
 951 gggcacccca gggggcgagc cggcgccgca cgtcaaacc gcgcggttg
 1001 cggagcaacc tgggtgtgcc ggccagcatg cgggcggggg gacgcagtcg
 1051 gggcctgccc atgcgagcga atccgcccgc tcggtgacgc cggctgcggc
 1101 gtccggtgtc ccgggcgcac gggcgggcgc cgccgcgcgc agcggatccg
 1151 ccgtgggagc gggcgcgcggt tcgagcgtgg gtacggccgc ggcctcgggc
 1201 gcgggggtcgc atgctgccac tgggcggggc cgggtggcta cctcggacaa

FIG. 2 (continued)

1251	ggcggcgggca	ccgagcacgc	gggcgggcctc	ggcgcgggacg	gcacctcctg
1301	cccgcgccgcc	gtcgaccgat	cacatcgaca	aacccgatcg	cagcgagtct
1351	gcagatgacg	gtacgccegg	gtcgatgac	ccggtgtcgg	cggctcgggc
1401	ggcacgcgac	gccgccactg	cagctgccag	cgcccgccag	cgtggccgcg
1451	gtgatgcgct	gcggttggcg	cgacgcacgc	cggcggcgct	caacgcgtcc
1501	gacaacaacg	cgggcgacta	cgggttcttc	tggatcacgc	cggtgaccac
1551	cgacgggttc	atcgctcgtg	ccaacagcta	tgggctggcc	tacatacccg
1601	acgggatgga	attgccgaat	aagggtgtact	tggccagcgc	ggatcacgca
1651	atcccggttg	acgaaattgc	acgctgtgcc	acctaccg	ttttggccgt
1701	gcaagcctgg	gcggctttcc	acgacatgac	gctgcggggcg	gtgatcggta
1751	ccgcgggagca	gttggccagt	tccgatcccc	gtgtggccaa	gattgtgctg
1801	gagccagatg	acattccgga	gagcggcaaa	atgacggggc	ggtcgcggct
1851	ggaggtcgtc	gacccctcgg	cggcggctca	gctggccgac	actaccgatc
1901	agcgtttgct	cgacttggtg	ccgccggcgc	cggtggtatgt	caatccaccg
1951	ggcgatgagc	ggcacatgct	gtggttcgag	ctgatgaagc	ccatgaccag
2001	caccgctacc	ggccgcgagg	ccgctcatct	gcgggcgttc	cgggcctacg
2051	ctgcccactc	acaggagatt	gccctgcacc	aagcgcacac	tgcgactgac
2101	gcggccgctc	agcgtgtggc	cgtcgcggac	tggctgtact	ggcaatacgt
2151	caccggggtg	ctcgaccggg	ccctggccgc	cgcatgctga	

